

Claire Thompson<sup>1</sup>, Joanne Shi Huey Tan<sup>2</sup>, Catherine Yan Hong Dong<sup>3,4</sup>

<sup>1</sup>James Cook University Singapore; <sup>2</sup>TMC Academy Singapore, <sup>3</sup>Department of Pharmacology, National University Health System, Singapore; <sup>4</sup>School of Psychiatry, University of New South Wales, Australia.

## Background:

- Four potentially useful brief tests for cognitive & functional change are: the *Repeatable Battery for the Assessment of Neuropsychological Status* (RBANS<sup>1</sup>), *Test Your Memory* (TYM<sup>2</sup>), and the *AD8 Dementia Screening Interview* for both patient and informant reports of functional changes (AD8-P & AD8-I<sup>3</sup>).
- Singapore has a rapidly ageing population: many elderly individuals do not speak fluent English and levels of formal education vary.
- We investigated test-retest reliability of the tests and convergent validity with MoCA<sup>4</sup>, Abbreviated Mental Test (AMT<sup>5</sup>) & MMSE<sup>6</sup>.
- Age and education effects also examined.

## Method:

- 28 cognitively intact NCI participants aged 53 to 78 (M = 63.29, SD = 5.84).
- RBANS, TYM, AD8-P & AD8-I administered at two time points with a 14 day interval.
- Colour Trails Test (CTT) and modified Boston Naming Test (mBNT) added to RBANS composite score to increase sensitivity<sup>7</sup>.
- AMT, MoCA, MMSE & GDS at time 1 only.
- Analysed Pearson's  $r$  (& ICC) gain scores ( $t$ -test,  $df = 27$ ) and age & education affects.

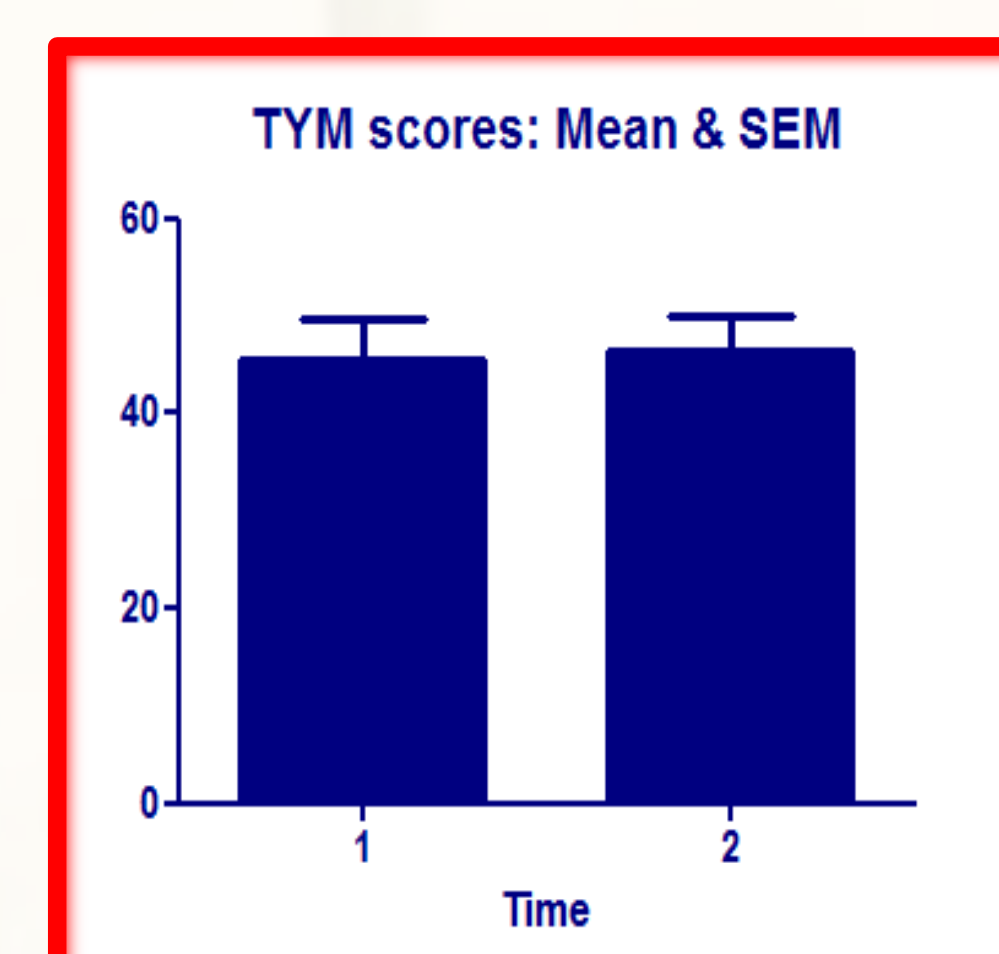
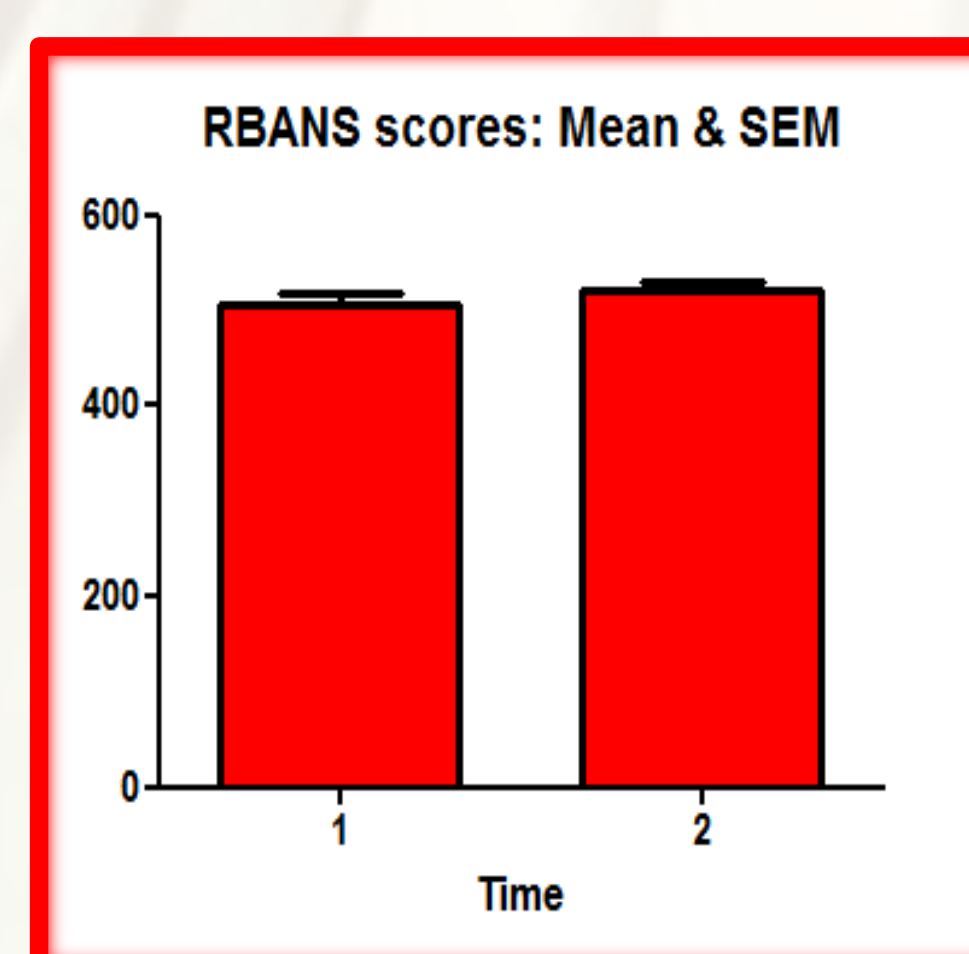
Demographic characteristics of the sample.

	Minimum	Maximum	Median	Mean (SD)
Age	53	78	63.5	63.29 (5.84)
Years education	2	22	12.0	12.32 (4.87)
Gender (% female)	68			
Ethnicity:				
Chinese (%)	96			
Other Asian (%)	4			
AMT	9	10	10	9.68 (0.48)
MoCA	21	30	27	26.64 (2.36)
MMSE	26	30	28	27.96 (1.45)

## Results:

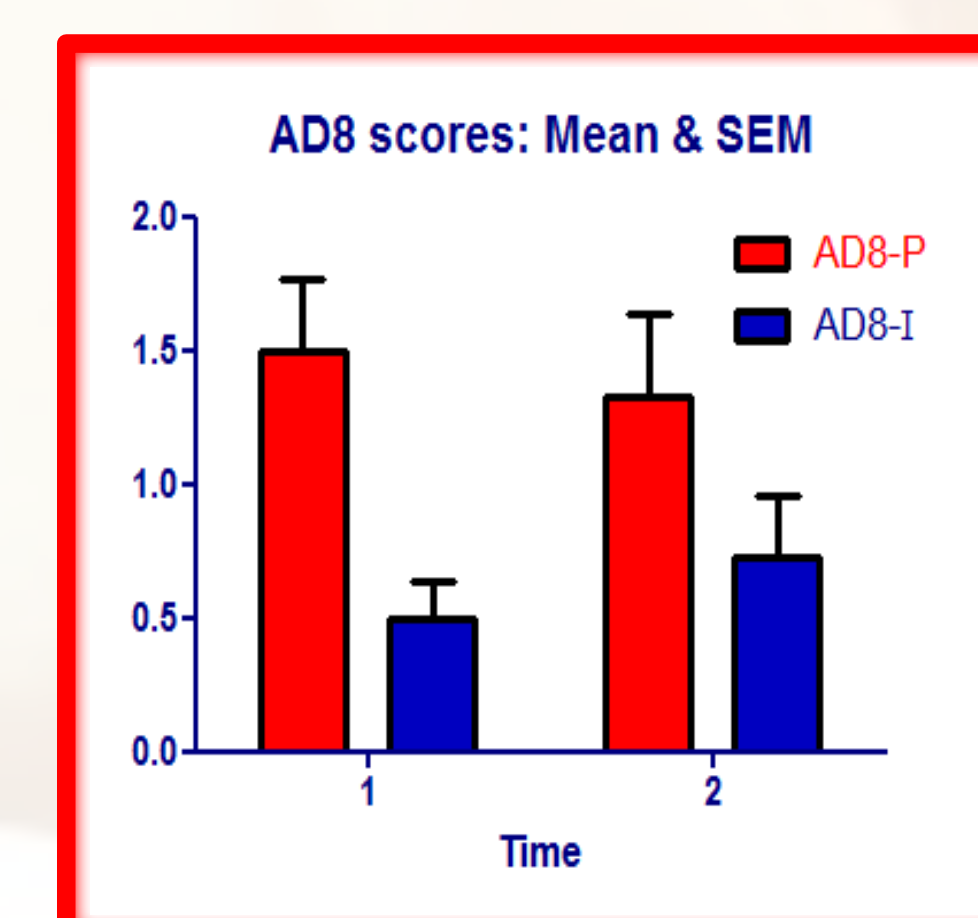
Test-retest reliability and gain score mean(SD):

- RBANS:  $r = .85^{**}$ . Gain = 13.18 (35.43),  $p = .06$ .
- TYM:  $r = .81^{**}$ . Gain = .71 (2.37),  $p = .12$ .
- AD8-P:  $r = .64^{**}$ . Gain = -.11 (1.40),  $p = .69$ .
- AD8-I:  $r = .77^{**}$ . Gain = .25 (.84),  $p = .13$ .



## Convergent validity:

- The RBANS composite showed convergent validity with TYM, MoCA & MMSE, but not with AMT or AD8.
- Age had no effect but education correlated with RBANS ( $r = .54^{**}$ ), TYM ( $r = .76^{**}$ ), & MMSE ( $r = .70^{**}$ ).
- AD8-P correlated with GDS depression scores ( $r = .67^{**}$ ).



## Conclusions:

- Test-retest reliabilities are adequate for these tests. There is convergent validity evident in tests of cognition and divergent from tests of function.
- Education effects are noteworthy.
- AD8-P reflects non-cognitive basis of subjective self-reported impairments.
- This study contributes knowledge of reliability and validity of these tests, and addresses the needs of Singapore's large ageing population.
- The results are sufficiently encouraging to warrant the evaluation of these tests in a cognitively impaired population.